

Calfed Bay-Delta Program												
Tracking Table for Ecosystem Restoration Projects												
July 28, 1999												
CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
Contract Agency: CALFED Bay-Delta Program (Prop 204 Funds)												
97-C01	RD 108 screen construction	Fish Screen	RD 108	Sacramento Mainstem	\$2,500,000	\$2,500,000	\$2,209,937	\$3,800,000	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Fully executed 7/16/98 - Construction complete. Completed Amendment to extend contract 6 mos. Through 12/31/99. High water levels have delayed completion of construction until Fall 1999.
97-C02	Princeton Fish screen construction B73	Fish Screen	RD1004	Sacramento Mainstem	\$1,750,000	\$1,750,000	\$1,489,027	\$544,000	\$2,675,000		Reduce entrainment of outmigrating and resident fish. Measure screen approach, sweep, and bypass flow velocities.	Fully executed 9/22/98, Construction 95% complete. Finished start-up testing.
97-C03	Watershed management planning for Sacramento River Riparian Program		DWR	Sacramento Mainstem	\$200,000	\$200,000	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Participation and extent of implementation activities. Protect and enhance riparian habitat. Measure riparian density and species composition, pre and post project.	Fully executed 8/4/98. DWR completed subcontract with Chico State for the program.
97-C04A	Selected fish screens	Fish Screen	DFG	Sacramento Tributaries	\$446,250	\$374,850	\$28,955	\$0	\$0		Reduce entrainment of outmigrating and resident fish. Measure screen approach, sweep, and bypass flow velocities.	Fully executed contract for small screens for 374,850 on 2/2/99.
97-C04B	Selected fish screens	Fish Screen	DWR	Suisun Marsh	\$2,784,600	\$0	\$0	\$0	\$151,000		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	DFG cannot contract for fish screen construction over \$500,000. Suisun marsh screens will be withdrawn until a new project proponent has been selected and project plans finalized. They will resubmit as a potential directed program.
97-C05	Effects of wetlands restoration on methyl mercury levels	Water Quality and Temperature	UC Davis	Delta	\$546,171	\$546,171	\$68,602	\$0	\$0		Evaluate relationship of physical, chemical and biological gradients on methyl mercury production and bioaccumulation. Sample levels of mercury in bioindicator species from various sites in the Delta. Sample sediment cores from various sites and locations in the Delta will be used in mercury methylation experiments.	Fully executed 9/24/98. Completed purchase of mercury analyzer have verified analytical methods-field sampling & have started analyzing field samples ongoing to catalogue of wetlands to determine key gradients.
97-C06	Contaminant effects on smelt	Water Quality and Temperature	UC Davis	Delta	\$437,326	\$437,326	\$2,563	\$0	\$0		Evaluate the potential impact of contaminants on Delta smelt. Obtain samples and evaluate using histopathology, genetic and otolith analyses. Evaluate exposure of young smelt to chemical commonly found in Delta.	Fully executed 11/20/98.
97-C07	Preventing exotic introductions from ballast water	Introduced and Undesirable Species	UC Sea Grant Extension Program	North Bay	\$222,830	\$222,830	\$13,236	\$0	\$63,885		Increase maritime industry members' awareness of ballast release issues and alternative practices to reduce new introduction into the Delta. Participation and effectiveness surveys.	Fully executed 8/24/98. Project delayed until 2/99 due to staffing problems. Work on newsletter & outreach has begun.
97-C08	San Joaquin River real-time water quality management program	Water Quality and Temperature	DWR	San Joaquin Mainstem	\$832,000	\$831,857	\$0	\$0	\$0		Increase water user awareness of real time data and its beneficial use. Survey participation, use of data base and changes in load adjustments. Reduce water quality excursion in the SJ Delta system as real time data is utilized. Measure water quality conditions and variances over time. Monitor New Melones water operations for net decrease in releases following a forecast.	Fully executed 3/30/99. Developing sub-contracts for the project.
97-C09	Developing a genetic baseline for San Joaquin salmon	Fish Management	DFG	San Joaquin Mainstem	\$387,003	\$387,003	\$0	\$0	\$800,000		Characterize the genetic makeup of SJ Fall run chinook salmon. Collect and analyze tissue samples from populations over 3 year	Contract fully executed by 2/1/99.
97-C11	Gravel at Basso Bridge	Habitat Restoration in Floodplains & Marshes	DFG	Tuolumne River	\$250,975	\$250,975	\$4,095	\$0	\$22,100		Improve the quality and quantity of spawning habitat, use, and durability. Redds survey; visual observation; carcass surveys - pre and post project. Monitor channel and geomorphic characteristics (pebble counts, bulk samples, profiles), pre and post project and over time. Insert storage of gravel will be transported downstream over time to support downstream habitats. Monitor channel and geomorphic characteristics (pebble counts, bulk samples, profiles) at downstream locations, pre and post project.	Fully executed 1/5/99. Permit application complete & should receive approval soon.
97-C12	Evaluation of alternative pesticide use reduction	Water Quality and Temperature	UC Davis	Landscape	\$957,781	\$957,781	\$16,405	\$0	\$746,827		Monitor water quality before and after outreach program to determine efficiency of program.	Fully executed 8/26/98, completed Task Order for year 1 work 11/18/98. Development of Alternative Practices Matrix 49% complete
98-C01	Twitchell Island Subsidence Study	Habitat Restoration in Floodplains & Marshes	DWR	Delta	\$3,583,000	\$3,583,000	\$0	\$0	\$0		Evaluate techniques to reverse the subsidence of Delta island habitat. Monitor biomass accretions and deposition of sediment over time, and costs.	Fully executed 5/20/99. Developing subcontracts for the project.
98-C02	Culture of Delta Smelt	Fish Management	UC Davis, Animal & Science	Delta	\$194,870	\$194,870	\$119,278	\$0	\$0		Develop culture methods to supply all life stage of delta smelt for research studies. Collect data on larvae size, weight, and food intake for different water types, tank size, and water constituents.	Fully executed 9/10/98. Physical improvements to site completed, testing, & delta water supply with larval fish. Broodfish collection & rotifer culture complete. Larval & juvenile rearing progressing.
98-C03	Hamilton wetlands restoration planning	Habitat Restoration	Calif. Coastal Conservancy and SF BCDC	Northbay	\$1,000,015	\$1,000,015	\$458,923	\$0	\$1,324,000		Restore subsided diked area to upland seasonal and tidal wetland habitats. Monitoring of site physical characteristics (elevation, contours, etc.) and hydraulics. Water quality monitoring (salinity, temperature, and DO). Monitor vegetation development (extent, location, composition, and density). Survey of use by fish and wildlife.	Fully Executed 10/28/98. Completed the EIR/EIS, Hamilton Conceptual Restoration Plan, and feasibility study.
98-C04	Merced River Ranch acquisition and restoration	Habitat Restoration	DFG	Merced River	\$658,000	\$658,000	\$0	\$0	\$45,500	42	Protect and enhance riparian, wetland and aquatic habitats, and provide supply of gravel for spawning habitat projects.	Combined with 98-C05 Basso Bridge land acquisition.
98-C05	Basso Bridge land acquisition		DFG	Tuolumne River	\$172,500	\$172,500	\$0	\$0	\$0	318	Protect spawning riffles, and protect and enhance riparian species.	Fully executed 1/5/99. Working with Wildlife Conservation Board to start work on property appraisals.
98-C06	Water Quality Criteria for Chlorpyrifos and Diazinon (Designated Action)	Water Quality and Temperature Improvement	DFG	Landscape	\$70,000	\$67,753	\$0	\$0	\$0		Develop water quality criteria for chlorpyrifos and diazinon. Conduct toxicity test on ceriodaphnia and psysa	Contract fully executed 3/8/99.
98-C07	Fathead Minnow Toxicity	Water Quality and Temperature Improvement	CVRWQCB	Landscape	\$400,000	\$400,000	\$0	\$0	\$0		Evaluate toxicity and water quality in the Delta. Collect samples quarterly from various river and slough sites in the Delta for subsequent lab testing for contaminants and toxicity (fathead minnow larval growth and survival, ceriodaphnia reproduction)	Contract fully executed 2/5/99.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
98-C08	Algal Toxicity	Water Quality and Temperature Improvement	CVRWQCB	Landscape	\$500,000	\$500,000	\$0	\$0	\$0		Evaluate toxicity and water quality in the Delta. Collect samples quarterly from various river and slough sites in the Delta for subsequent lab testing for contaminants and toxicity.	Contract fully executed 2/5/99.
98-C09a	Sediment Water Quality	Water Quality and Temperature Improvement	DPC	Delta	\$24,000	\$24,000	\$0	\$0	\$0		Determine toxicity criteria and sediment reuse potential to develop a Delta Dredging Reuse Strategy.	Contract fully executed 4/16/99.
98-C09b	Sediment Water Quality	Water Quality and Temperature Improvement	DFG	Delta	\$276,000	\$276,000	\$0	\$0	\$0		Same as 98-C09a	Fully executed 3/30/99.
98-C09c	Sediment Water Quality	Water Quality and Temperature Improvement	RWQC	Delta	\$200,000	\$200,000	\$0	\$0	\$0		Same as 98-C09a	Fully executed 6/3/99.
98-C10	CMAAP DA		DWR	Landscape	\$800,000	\$800,000	\$0	\$0	\$0		Develop a Comprehensive Monitoring and Research Program for CALFED.	Fully executed 5/4/99.
98-C11	Chinook Salmon Movement in the Lower SJR and South Delta	Fish Passage Improvements	DFG	San Joaquin River and Delta	\$285,000	\$285,000	\$0	\$0	\$0		Evaluate fish migration and delays through lower San Joaquin River and south Delta as potentially impacted by South Delta Temporary Barriers, Head of Old River Barrier and/or low DO levels. Track movement of ultrasonic tagged adults.	Fully executed 6/2/99.
98-C12	Genetic Comparison of Steelhead Stocks in Clear Creek	Improved Fish Management & Hatchery Operations	USFWS	Clear Creek	\$45,493	\$0	\$0	\$0	\$0		Evaluate alternative steelhead stocks for future restocking of Clear Creek. Collect tissue samples for genetic evaluation.	Contract sent to contractors for signature 5/4/99.
98-C13	Spawning Areas of Green Sturgeon in the Upper Sacramento River?	Habitat Restoration in Floodplains & Marshes	USFWS	Sacramento River	\$60,801	\$0	\$0	\$0	\$0		Characterization of Green Sturgeon habitat and life history patterns in the upper Sacramento River. Survey of spawning areas.	Contract sent to contractor for signature 3/19/99.
98-C14	Monitoring Spring and Winter-run Chinook Salmon and Steelhead in Battle Creek	Improved Fish Management & Hatchery Operations	USFWS	Battle Creek	\$150,000	\$0	\$0	\$0	\$0		Evaluate life history characteristics for spring and winter run chinook and steelhead in Battle Creek. Fish counts, snorkel surveys, juvenile monitoring using screw traps. Genetic data for species.	Contract sent to contractor for signature 5/20/99.
98-C15	Biological Assessment of Green Sturgeon in the Sacramento-San Joaquin Watershed	Improved Fish Management & Hatchery Operations	UC Davis	Sacramento-San Joaquin Watershed	\$241,000	\$241,000	\$0	\$0	\$0		Identify the biological characteristics of green sturgeon. Behavioral and tolerance limits to temperature ranges for various size fish. Biological examination of reproduction system and function. Genetic data for GS and white sturgeon. Examine Embryo samples to measure developmental process over time and varying river	Contract fully executed 3/30/99.
98-C16	Developing a Methodology to Accurately Simulate Entrainment of Fish	Fish Screen Improvements	DFG	Delta	\$200,000	\$0	\$0	\$0	\$0		Evaluate effectiveness of barge sampling in estimating existence of fish at/near diversion locations. Perform fish-friendly pump sampling and diversion net sampling at various times.	Contractor has completed review & was received at DFG contract office 5/26/99. In the budget office.
99-C01	Cosumnes River Feasibility Study	Habitat Restoration in Floodplains & Marshes	The Nature Conservancy	Cosumnes River	\$400,000	\$0	\$0	\$0	\$0		Feasibility Study of Ecosystem Restoration opportunities on the Cosumnes River.	Contract to contractor for signature 5/20/99.
99-C02	Mokelumne River Feasibility Study	Habitat Restoration in Floodplains & Marshes	EBMUD	Mokelumne River	\$400,000	\$400,000	\$0	\$0	\$0		Feasibility Study of Ecosystem Restoration opportunities on the Mokelumne River.	Contract fully executed 4/20/99
				Total: \$	\$21,075,615	\$17,360,931	\$4,393,021	\$4,344,000	\$5,628,312			
				32		82%	21%					81%
				Contracts		Obligated	Expended					Executed
Contract Agency: National Fish and Wildlife Foundation (Prop 204 funds)												
97-N02	Sacramento River floodplain acquisition and riparian restoration	Habitat Restoration in Floodplains & Marshes	WCB, USFWS, The Nature Conservancy	Sacramento Mainstem	\$9,879,800	\$9,879,800	\$6,066,214	\$0	\$0	1,500 <sup>1</sup>	Increase extent of channel meander and flood zones. Mapping of aquatic and terrestrial habitats. Increase native riparian growth and reduce exotic distribution adjacent to the river. Measure tree density and species composition and height, pre and post project. Measure exotic weed cover, pre and post project. Measure floor litter quality and quantity to evaluate accumulation and Carbon/Nitrogen ratios, pre and post project. Conduct point counts and areas searches for songbird populations and habitat characteristics as indicator of ecological health. Groundwater piezometers samples for evaluating water quality adjacent to restoration area, pre and post project and adjacent sites.	Contract signed 2/4/99. First property purchase in escrow.
97-N03A	Sacramento River acquisition and riparian forest restoration	Habitat Restoration in Floodplains & Marshes	USFWS, The Nature Conservancy	Sacramento Mainstem	\$780,000	\$780,000	\$1,435	\$0	\$0	300 <sup>2</sup>	Same as 97-N02	Contract signed 12/8/98.
97-N03B	Sacramento River floodplain acquisition and riparian restoration	Habitat Restoration in Floodplains & Marshes	WCB	Sacramento Mainstem	\$512,500	\$512,500	\$0	\$0	\$0	See 97N03A	Same as 97-N02	Scope of work received 3/16/99. Under review. Draft contract complete.
97-N04	Sacramento River meander restoration	Habitat Restoration in Floodplains & Marshes	The Nature Conservancy	Sacramento Mainstem	\$898,700	\$898,700	\$816,800	\$0	\$0	95	Same as 97-N02	Contract signed 10/28/98. Property purchased. Completing subcontracts for site preparation and planting.
97-N05	Restoration planning (M and N Fork American River, Auburn Ravine, Coon Creek)	Habitat Restoration in Floodplains & Marshes	Placer County	American River	\$222,530	\$222,530	\$0	\$0	\$222,530		Evaluate restoration needs toward the protection and improvement in water quality, aquatic habitat and its accessibility, and riparian communities.	Contract executed 3/29/99.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
97-N06	Butte Creek acquisition and riparian restoration	Habitat Restoration in Floodplains & Marshes	CSU, Chico	Butte Creek	\$187,128	\$187,128	\$0	\$0	\$135,000	90 <sup>2</sup>	Protect riparian habitat. Monitor revegetation. Similar to 97-N02.	Contract signed 12/21/98.
97-N07	Cottonwood Creek channel restoration planning (	Habitat Restoration in Floodplains & Marshes	Graham Matthews & Associates	Cottonwood Creek	\$61,000	\$61,000	\$20,081	\$0	\$10,000		Describe geomorphic conditions and changes in region toward development of channel and riparian restoration plan. Survey of geomorphic and riparian characteristics, current and historical, and eventually post project.	Contractor signed 7/1/98. Work is ongoing.
97-N08	Lower Mill Creek riparian restoration	Habitat Restoration in Floodplains & Marshes	Mill Creek Conservancy, The Nature Conservancy	Mill Creek	\$69,000	\$69,000	\$1,899	\$30,000	\$109,670	3	Increase native riparian growth adjacent to the river. Measure tree density and species composition and height, pre and post project.	Contract signed 12/29/98.
97-N09	Monitoring of Delta contaminants	Water Quality and Temperature	San Francisco Baykeeper	Delta	\$100,000	\$100,000	\$35,858	\$0	\$20,000		Evaluate toxicity and water quality in the Delta. Collect samples quarterly from various river and slough sites in the Delta for subsequent lab testing for contaminants and toxicity (fathead minnow larval growth and survival, ceriodaphnia reproduction)	Contract signed 9/18/98.
97-N10	Jepson Prairie restoration and conservation plan	Habitat Restoration in Floodplains & Marshes	Solano County Farmlands, Open Space Foundation	Delta	\$244,801	\$244,801	\$0	\$0	\$0	600 <sup>2</sup>	Restore habitat. Monitor vegetation/tree survivorship, abundance, size and distribution, pre and post project and comparison to control.	Contract signed 1/29/99.
97-N11	In-Channel Island restoration/demonstration	Habitat Restoration in Floodplains & Marshes	Association of Bay Area Governments	Delta	\$270,270	\$270,270	\$197,145	\$0	\$91,000		Demonstrate effective biotechnical methods to reduce erosion of in-channel islands and adjacent delta island banks. Visual observation of wave and current energy, pre and post project for different application practices for different hydrodynamic conditions. Field mapping and sediment deposition/accretion pre and post project and compare with control. Survey of fish and wildlife use and breeding, including invasive non-native species. Demonstrate that installations can be installed while minimizing impact to existing ecological values. Pre and post project surveys of fisher and terrestrial biota. Survey for vegetation colonization and succession.	Contract signed 7/15/98.
97-N12	Franks Tract restoration	Habitat Restoration in Floodplains & Marshes	Moffat and Nichol Engineers, DPR, DWR	Delta	\$231,500	\$231,500	\$35,912		\$370,000	40	Restoration of deeply flooded habitat to tidal perennial aquatic, shaded riverine aquatic, and mid channel island shoal and shoal habitats. TBD - Physical/geomorphological characteristics of islands.	Contract signed 12/29/98.
97-N13	Tyler Island levee protection and habitat restoration pilot project	Habitat Restoration in Floodplains & Marshes	Habitat Assessment & Restoration Team, Inc	Delta	\$885,202	\$885,202	\$168,376	\$0	\$0	6	Evaluate alternative vegetative and biotechnical techniques for restoring and stabilizing levee and bank erosion and riparian and shallow water habitat. Measure boat wake energy dissipation for different installation practices, compare with control. Measure sediment deposition occurring with different installation practices, compare with control and different locations. Survey macroinvertebrate and fishery population for the different installation practices, compare with control and different locations. Survey survival and growth of vegetation between different installation practices, compare with control and different locations.	Contract signed 7/22/98.
97-N14	Cosumnes start-up stewardship and restoration	Habitat Restoration in Floodplains & Marshes	WCB, The Nature Conservancy	Cosumnes River	\$1,975,100	\$1,975,100	\$0	\$0	\$0		Conduct baseline monitoring of riparian vegetation, wildlife, avian and fish resources	Contract signed 6/22/99
97-N16	Bay Point shoreline Restoration Plan	Habitat Restoration in Floodplains & Marshes	East Bay Regional Park District	East Bay	\$165,000	\$165,000	\$0	\$0	\$53,900	52 <sup>2</sup>	Restore tidal salt marsh habitat and function. Monitor tidal flow and range over time. Monitor water quality and sedimentation processes over time. Monitor changes in plant species diversity, density and cover. Survey use by fish and wildlife over time.	Contract signed 8/12/98.
97-N18	Cullinan Ranch restoration)	Habitat Restoration in Floodplains & Marshes	Ducks Unlimited, Inc.	North Bay	\$368,500	\$368,500	\$0	\$0	\$682,000	1,495 <sup>2</sup>	See 97-N16	Contract executed 3/30/99.
97-N19	Tolay Creek restoration	Habitat Restoration in Floodplains & Marshes	Ducks Unlimited, Inc.	North Bay	\$283,000	\$283,000	\$232,090	\$0	\$422,000	312 <sup>2</sup>	See 97-N16	Contract and first task order approved by CALFED and signed 10/18/98. Channel modifications complete and levee breached Dec. 1998.
97-N20	Implementing programs to reduce the use of pesticides and fertilizers in Sacramento and San Joaquin watersheds	Water Quality and Temperature	Community Alliance with Family Farmers	Landscape	\$1,680,631	\$1,680,631	\$475,375	\$0	\$0		Increase awareness of users to detrimental impacts and mitigation approaches. User survey on past and post-project application. Evaluate different application techniques and their impact on runoff water quality, develop protocols and models. Water quality and flow measurements in surface water adjacent to sites. Increase farmer awareness of impacts of pesticide use and alternatives to reduce water quality problems in the Central Valley, and San Joaquin basin.	Contract signed 7/20/98.
97-N21	Knights Ferry gravel replenishment	Habitat Restoration in Floodplains & Marshes	Carl Mesick Consultants	Stanislaus River	\$538,410	\$538,410	\$98,878	\$0	\$80,000		Improve spawning habitat quality and quantity, and evaluate conditions for successful and durable restoration. Map redd locations and changes over time and under different gravel supply conditions, at various sites. Measure transect and vertical hydraulic gradient during spawning period and after incubation at various sites. Improve incubation habitat and conditions by adding gravel with no fines. Intergravel water temperatures, flows, DO levels, substrate size, fine sediment intrusion at various sites.	Contract signed 9/30/98.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPRA Funding	Other Funding	Acres	Monitoring	Status
99-N01	RD 2035 Fish Screen	Fish Screen Improvements	RD 2035	Sacramento River	\$100,000	\$100,000	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Contract executed 3/31/99.
99-N02	Expanding California Salmon Habitat to Allier Dams and Divisions	Fish Passage Improvements	Institute for Fisheries Resources	Landscape	\$49,000	\$49,000	\$0	\$0	\$0		Research project to inventory and develop a mechanism to purchase dams and diversions from willing sellers to improve fish passage	Contract signed 3/12/99.
99-N03	Life History and Stock Composition of Steelhead Trout	Fish Passage Improvements	Yuba Co. Water Agency	Yuba River	\$120,000	\$120,000	\$0	\$0	\$0		Characterization of steelhead habitat and life history patterns in the Yuba River. Trap fish through year, and then measure and collect scale and tissue samples for evaluation. Genetic data for steelhead.	Contract signed 6/9/99.
99-N04	Small Fish Screen Evaluation	Fish Screen Improvements	Pelgrim Mutual Water Company	Sacramento River	\$95,000	\$0	\$0	\$0	\$0		Evaluate the effect of screening small screen diversion. Flye net and live box sampling at screened and unscreened diversions at various hydraulic and operating conditions.	Contract sent to contractor for signature on 3/29/99. Project delayed due to damage to fish screen.
99-N01	ACID Fish Screen	Fish Screen Improvements	Anderson-Cottonwood Irrigation District	Sacramento River	\$5,100,000	\$0	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities. Evaluate the impact of shallow water restoration actions on water quality. Collect and conduct physicochemical analysis of water and soil samples.	Contract sent to contractor 7/23/99.
99-N02	Fish Treadmill Developed Fish screen Criteria for Native Sacramento-San Joaquin Watershed Fishes	Fish Screen Improvements	UC Davis	Landscape	\$947,690	\$0	\$0	\$0	\$0			
99-N03	East Delta Habitat Corridor (Georgiana Slough)	Habitat Restoration in Floodplains & Marshes	Habitat Assessment & Restoration Team, Inc	Landscape	\$1,133,000	\$0	\$0	\$0	\$0			
99-N04	Lake Red Bluff Riparian Area Restoration & Education Support Project	Habitat Restoration in Floodplains & Marshes	Calif. Coastal Conservancy	Sacramento Mainstem	\$29,987	\$0	\$0	\$0	\$0			
99-N05	Reintroduction of Endangered Soft Bird's Beak to Restored Habitat	Habitat Restoration in Floodplains & Marshes	UC Davis	Suisun Marsh	\$153,089	\$0	\$0	\$0	\$0			
99-N06	Linked Hydrogeomorphic Ecosystem Models to Support Adaptive Management	Habitat Restoration in Floodplains & Marshes	UC Davis	Conestuma-Mokelumne Basin	\$1,592,396	\$0	\$0	\$0	\$0			
99-N07	Chronic Toxicity of Environmental Contaminants in Sacramento-San Joaquin Delta	Water Quality and Temperature Improvement	UC Davis	Nurse Slough	\$693,895	\$0	\$0	\$0	\$0			
99-N08	Assessment of Pesticide Effects on Fish & Their Food Resources in the Sacramento-San Joaquin Delta	Water Quality and Temperature Improvement	UC Berkeley	Landscape	\$1,634,501	\$0	\$0	\$0	\$0			
99-N09	Effects of Introduced Species of Zooplankton & Cams on the Bay-Delta Food Web	Introduced & Undesirable Species	SF State University	Landscape	\$972,989	\$0	\$0	\$0	\$0			
99-N10	Assessing Ecological & Economic Impacts of the Chinese Mitten crab	Introduced & Undesirable Species	UC Berkeley	Bay Area	\$116,423	\$0	\$0	\$0	\$0			
99-N11	Purple Loosastripe Prevention, Detection & Control Actions for the Sacramento-San Joaquin River Delta System	Introduced & Undesirable Species	DFA	Landscape	\$131,297	\$0	\$0	\$0	\$0			
99-N12	Central Valley Steelhead Genetic Evaluation	Improved Fish Management & Hatchery Operations	DFG	Landscape	\$72,765	\$0	\$0	\$0	\$0			
99-N13	Development of a Comprehensive Implementation Plan for a Statistically Designed Marking & Recovery Plan	Improved Fish Management & Hatchery Operations	DFG	Landscape	\$78,230	\$0	\$0	\$0	\$0			
				Total: \$	\$32,654,818	\$20,303,572	\$5,201,085	\$30,000	\$2,379,100			
				25	62%	25%						
				Contracts	Obligated	Expended						80% Executed
95-M01	Interim Flow Restoration	Fish Screen Improvements	USFWS	Sacramento Tributaries	\$0	\$0	\$0	\$500,000	\$0		(Stakeholder funds) A separate Baile Creek Project recently approved has monitoring. See 99-B16.	Completed.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.  
<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
95-M02	Fish Screen and Ladder Construction	Fish Screen Improvements	Durham Mutual	Butte Creek	\$316,500	\$316,500	\$316,500	\$484,720	\$127,031		For Butte Creek system, 100,000 juvenile spring-run have been marked. Also evaluation of fish behavior at ladder entrance was completed.	Completed.
95-M03	Construct Fish Ladder on Parrott-Phelan Dam	Fish Passage Improvements	M&T Ranch/Parrott	Butte Creek	\$0	\$0	\$0	\$100,000	\$318,000		For Butte Creek system, 100,000 juvenile spring-run have been marked.	Completed.
95-M04	Gravel Restoration Project	Habitat Restoration in Floodplains & Marshes	DWR	Sacramento River	\$0	\$0	\$0	\$39,400	\$13,100		Small gravel project. Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Completed.
95-M05	Pump Station Relocation Construction	Fish Passage Improvements	M&T Ranch/Parrott Investments Co.	Sacramento Tributaries	\$1,810,000	\$1,810,000	\$1,810,000	\$2,254,000	\$830,000		A separate AFRP monitoring plan. NMFS monitored velocity on screen face. Improve and restore spawning habitat and durability. Conduct redd counts and other use surveys.	Completed.
95-M06	Implementing programs to reduce the use of pesticides and fertilizers in Sacramento and San Joaquin watersheds	Water Quality & Temperature Improvements	Community Alliance with Family Farmers	Landscape	\$660,000	\$660,000	\$659,770	\$0	\$0		Monitoring of progress of willingness of farmers to reduce pesticide use is being documented.	Year 2 of 3 year project.
95-M07	Fish Screen Construction	Fish Screen Improvements	Suisun Resource Conservation District	Suisun Marsh	\$450,000	\$450,000	\$450,000	\$450,000	\$0		Suisun Resource Conservation District has long-term monitoring program. Reduce entrainment. Measure screen approach, sweep and bypass flow velocities.	Completed.
95-M08	Winter-run Chinook Salmon Captive Broodstock Program	Fish Screen Improvements	DWR	Landscape	\$300,000	\$300,000	\$284,000	\$0	\$250,000		Research protocols are peer-reviewed.	Completed.
96-M01	Construct Siphon & Associated Improvements.	Fish Passage Improvements	Western Canal Water District	Sacramento Tributaries	\$3,095,873	\$3,095,873	\$2,988,067	\$3,095,873	\$3,265,873		Monitoring plan has been designed and is underway. Reduce entrainment. Measure screen approach, sweep and bypass flow velocities.	Completed.
96-M02	Prospect Island - Shallow Water Habitat/Wetlands Restoration Plan	Habitat Restoration in Floodplains & Marshes	DWR	Delta	\$2,500,000	\$2,500,000	\$0	\$0	\$8,650,000		Design, implement and monitor restoration of shallow water habitat/wetlands on Prospect Island.	Expect contract execution in near future.
96-M03	Riparian Habitat Restoration Verona-Collinsville (Phase 1-Feas.)	Habitat Restoration in Floodplains & Marshes	USCOE	Sacramento River	\$500,000	\$500,000	\$237,725	\$0	\$500,000		Demonstration project will monitor riparian habitat	Completed.
96-M04	Princeton Pumping Plant Fish Screen (Phase 1-Feas.)	Fish Screen Improvements	RD 1004	Sacramento River	\$75,000	\$75,000	\$75,000	\$150,000	\$100,000		Reduce entrainment measure screen approach, sweep and bypass flow velocities.	Completed.
96-M05	Fish Screen -Feasibility Engineering	Fish Screen Improvements	Princeton-Codora-Glenn / Provident Irrigation Districts	Sacramento River	\$75,000	\$75,000	\$75,000	\$75,000	\$0		Monitoring does not apply to a feasibility study.	Completed.
96-M06	Cosumnes River Preserve (Valensin Ranch Acquisition)	Habitat Restoration in Floodplains & Marshes	The Nature Conservancy	Cosumnes River	\$1,500,000	\$1,500,000	\$1,500,000	\$1,250,000	\$9,250,000	3,300 <sup>1</sup>	Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Completed.
96-M07	Fish Screen Construction	Fish Screen Improvements	Princeton-Codora-Glenn / Provident Irrigation Districts	Sacramento River	\$5,500,000	\$5,500,000	\$3,603,773	\$5,281,200	\$0		Screen will have velocity monitoring. Owner will conduct fyke netting for fish counts.	Completion expected in December 2000.
96-M08	Fish Screen Construction (Phase 2 - Install Additional Screens)	Fish Screen Improvements	Suisun Resource Conservation District	Suisun Marsh	\$500,000	\$500,000	\$0	\$500,000	\$0		Suisun Resource Conservation District has long-term monitoring program. Reduce entrainment. Measure screen approach, sweep and bypass flow velocities.	Steering Committee recommended rescinding funds.
96-M09	Sherman Island - Levee Habitat Demonstration Project	Habitat Restoration in Floodplains & Marshes	DWR	Delta	\$480,000	\$480,000	\$76,265	\$0	\$480,000		Riparian habitat will be monitored for growth and endurance.	Bids exceed budget. Steering Committee denied request for additional funding. Proponent evaluating next step.
96-M10	Research to Predict Evolution of Restored Diked Wetlands	Habitat Restoration in Floodplains & Marshes	University of Washington	Delta	\$575,172	\$575,172	\$241,086	\$0	\$0		Project develops conceptual model based on field investigations.	Steering Committee approved additional \$100,172 for additional fisheries and bird field work.
96-M11	Applied Research to Identify Chinook Salmon Runs via Genetics	Fish Management and Hatchery Operations	DWR	Landscape	\$450,000	\$450,000	\$0	\$0	\$600,000		Research protocols are peer-reviewed.	Project is underway.
96-M12	Battle Creek - Chinook Salmon & Steelhead Restoration Study	Fish Management and Hatchery Operations	Bill Keir Associates	Battle Creek	\$308,000	\$308,000	\$308,000	\$0	\$0		Monitoring is part of a recently approved Battle Creek project. See 96-B18.	Completed.
96-M13	Yolo Bypass - Habitat Restoration Study	Habitat Restoration in Floodplains & Marshes	DWR	Yolo Bypass	\$226,000	\$226,000	\$226,000	\$0	\$30,000		Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Project assigned to NFWF. Project completed.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
96-M14	Clear Creek - Property Acquisition	Habitat Restoration in Floodplains & Marshes	Western Shasta RCD	Clear Creek	\$211,000	\$211,000	\$211,000	\$211,000	\$0	120	Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Project assigned to NFWF. Project completed.
96-M15	Intro. of Non-indigenous Aquatic Species Research Program	Introduced & Undesirable Species	San Francisco Estuary Institute	Landscape	\$197,000	\$197,000	\$184,850	\$0	\$0		Reports are peer-reviewed.	90% complete.
96-M16	Sacramento River and Major Trib.- Corridor Mapping Project	Habitat Restoration in Floodplains & Marshes	CSU, Chico	Sacramento River	\$145,200	\$145,200	\$61,342	\$0	\$0		Products meet mapping standards.	80% complete.
96-M17	Yuba River Fish Screen Replacement	Fish Screen Improvements	Browns Valley Irrigation District	Yuba River	\$114,750	\$114,750	\$80,857	\$114,750	\$116,500		Reduce entrainment. Measure screen approach, sweep and bypass flow velocities.	95% complete.
96-M18	Determine Effects of Toxics	Water Quality & Temperature Improvements	Phyllis Fox & Associates	Landscape	\$110,000	\$110,000	\$15,000	\$0	\$0		Project terminated.	Agreement could not be reached on project scope.
96-M19	Wilkins Slough - Fish Screen Prelim. Design	Fish Screen Improvements	RD 108	Sacramento River	\$100,000	\$100,000	\$100,000	\$100,000	\$16,300		Monitoring does not apply to a feasibility study.	Completed.
96-M20	Fish Screen Project	Fish Screen Improvements	Banta-Carbona Irrigation District	San Joaquin River	\$100,000	\$100,000	\$0	\$1,916,750	\$0		Reduce entrainment of outmigrating and resident fish. Measure screen approach, sweep and bypass flow velocities.	Funding rescinded by mutual consent due to timing.
96-M21	Adams Dam Fish Screen & Ladder	Fish Screen Improvements	El Escalon Ranch	Butte Creek	\$70,304	\$70,304	\$70,301	\$0	\$50,000		Draft monitoring plan for physical and biological monitoring has been completed by owner. Reduce entrainment. Measure screen approach, sweep and bypass flow velocities.	Completed.
96-M22	Gorill Dam Fish Screen & Ladder	Fish Screen Improvements	Gorill Ranch	Butte Creek	\$67,990	\$67,990	\$61,191	\$0	\$56,500		Draft monitoring plan for physical and biological monitoring has been completed by owner. Reduce entrainment. Measure screen approach, sweep and bypass flow velocities.	Completed.
96-M23	Innovative Fish Screen for Small Diversions	Fish Screen Improvements	Jim Buell & Associates	Landscape	\$90,000	\$90,000	\$51,773	\$0	\$0		Research protocols are peer-reviewed.	Project will be complete at 80% of work due to ESA concerns.
96-M24	Butte Creek - Watershed Management Strategy Plan	Watershed Management	CSU, Chico	Butte Creek	\$83,000	\$83,000	\$57,722	\$0	\$83,000		Existing conditions report and recommendation for future action including monitoring.	90% complete.
96-M25	Butte Creek - Chinook Salmon & Establish Watershed	Watershed Management	Western Shasta RCD	Butte Creek	\$50,000	\$50,000	\$40,104	\$50,000	\$0		Monitoring is part of a recently approved Butte Creek project. See 96-B16.	50% complete.
96-M26	Prospect Island - Develop Monitoring Plan	Habitat Restoration in Floodplains & Marshes	DWR	Delta	\$35,000	\$35,000	\$35,000	\$0	\$0		Monitoring plan is complete.	Completed.
96-M27	North Delta Area - Juvenile Salmon Rearing	Habitat Restoration in Floodplains & Marshes	CSU, Sacramento	Delta	\$24,500	\$24,500	\$19,048	\$0	\$0		Inventory of rearing habitat for fisheries, including fisheries surveys.	Field work complete.
97-M01	Wilson Ranch screen	Fish Screen	Deseret Farms of Calif.	Sacramento Mainstem	\$200,000	\$0	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Draft contract sent to Deseret Farms of California.
97-M02	Butte Creek screens and fish passage	Fish Passage	DWR	Butte Creek	\$395,000	\$395,000	\$0	\$0	\$0		See 96-B16	DWR has completed first phase of work; remaining work in progress.
97-M03	Gorill Dam screen and ladder	Fish Screen	Gorill Land Company	Butte Creek	\$369,641	\$369,641	\$332,677	\$755,948	\$268,316		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities. Increase upstream passage of returning adults.	Project is complete.
97-M04	Adams Dam screen and passage	Fish Screen	Ducks Unlimited, Inc.	Butte Creek	\$217,000	\$217,000	\$216,892	\$508,192	\$171,000		Increase upstream passage of returning adults. Monitoring of fish behavior at the entrance of and movement through the ladder. Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Project is complete.
97-M05	Saeltzer Dam Fish Passage	Fish Passage	Townsend Flat Water Ditch Company	Clear Creek	\$138,200	\$0	\$0	\$0	\$0		Increase upstream passage of returning adults. Monitoring of fish behavior at the entrance of and movement through the ladder. Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	USBR undertaking environmental and permitting tasks; so CUWA's funding for this project was reduced by about \$100,000. Project on hold until negotiations between Townsend Flat Water Ditch Co. and USBR regarding water rights are concluded.
97-M06	Hastings Tract screen feasibility study	Fish Screen	Hastings Island Land Company	Delta	\$27,000	\$0	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities. Increase upstream passage of returning adults.	Draft contract being prepared.
97-M07	Banta-Carbona fish screen	Fish Screen	Banta-Carbona Irrigation District	San Joaquin Mainstem	\$938,876	\$0	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities. Increase upstream passage of returning adults.	Received proponents indication of desire to proceed. Contract under preparation.
97-M08	Tuolumne River channel restoration (Pool 9)	Fish Passage	Turlock Irrigation District	Tuolumne River	\$2,353,100	\$0	\$0	\$0	\$0		Increase survival of outmigrating smolts. Monitor temperature and water quality, pre and post project. Conduct mark/recapture experiments. Protect and restore spawning habitats and their durability. Monitor flows and geomorphic and channel characteristics pre and post project. Survey spawning activity, pre and post project.	Negotiating a change of scope for review by CALFED.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
97-M09	Tuolumne River setback levees and channel restoration	Habitat Restoration	Turlock Irrigation District	Tuolumne River	\$2,801,000	\$0	\$0	\$3,382,000	\$50,000		Increase survival of outmigrating smolts. Monitor temperature and water quality, pre and post project. Conduct mark/recapture experiments. Protect and restore spawning habitats and their durability. Monitor flows and geomorphic and channel characteristics pre and post project. Survey spawning activity, pre and post project.	Negotiating a change of scope for review by CALFED.
				Total: \$	\$27,958,105	\$21,499,930	\$14,084,744	\$20,698,833	\$23,225,622			
				43		77%	50%					77%
				Contracts		Obligated	Expended					Executed
Contract Agency: U.S. Bureau of Reclamation (Federal funds)												
97-B01	Watershed improvements/sediment stabilization (Deer, Mill, Antelope Creeks)	Watershed Management	USFS	Deer, Mill, Antelope Creeks	\$371,000	\$371,000	\$121,360	\$0	\$89,000		Existing long-term condition monitoring program in-place	Contract executed 3/16/98.
97-B02	Sedimentation movement and availability and monitoring in the Delta	River Channel Changes	USGS	Delta	\$1,046,200	\$1,046,200	\$242,800	\$0	\$0		Describe the movement and availability of sediment in the Delta, as needed for habitat restoration. Monitor sediment transport (suspended load and bedload) at several locations.	Contract executed 3/16/98 for \$587,000. Contract executed 5/21/98 for \$460,000.
97-B03	Liberty Island acquisition	River Channel Changes	USFWS	Delta	\$8,677,000	\$8,677,000	\$240,000	\$25,000	\$0	4,760 <sup>1</sup>	Protect and restore tidally influenced wetlands, riparian corridors, and upland habitats. Measure distribution of habitats and species populations.	Contract executed 3/11/98. NEPA documentation underway. Acquisition expected by 10/31/99.
97-B04	Acquisition and restoration of Refuge lands (SJR NWR)	Habitat Restoration	USFWS	San Joaquin Mainstem	\$10,647,000	\$10,647,000	\$1,717,274	\$0	\$9,353,000	6169 <sup>1</sup>	Protect and restore lands, riparian corridors, and other wetland habitats. Measure distribution of habitats and species populations.	Contract executed 3/11/98. One parcel acquired, appraisals underway on other parcels. Closure expected in Sept.
97-B05	Bear Creek floodplain restoration demonstration	Habitat Restoration	USFWS	San Joaquin River	\$334,000	\$334,000	\$331,408	\$0	\$80,000	1326 <sup>2</sup>	Protect and enhance riparian, floodplain and wetland habitats. Measure distribution of habitats and species populations.	Contract executed 3/14/98.
97-B06	Assessment of organic matter in the habitat and its relationship to the food chain	Water Quality and Temperature	USGS	Landscape	\$1,440,649	\$1,550,649	\$413,842	\$0	\$0		Evaluate habitat influences on the production and utilization of organic matter as food source in the Delta, and improve modeling capabilities. Obtain or measure food quality and quantity from various locations and habitat types	Contract executed 3/16/98 for \$517,000. Contract executed 7/22/98 for \$833,000.
98-B01	Richter Brothers screen	Fish Screen	Richter Brothers	Sacramento Mainstem	\$49,000	\$49,000	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Executed 6/5/98.
98-B02	Boeger Family Farm screen - Feasibility Study	Fish Screen	Boeger Family Farms	Sacramento Mainstem	\$15,000	\$15,000	\$13,811	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Executed 6/18/98.
98-B03	ACID fish passage	Fish Passage	Anderson-Cottonwood Irrigation District	Sacramento Mainstem	\$325,000	\$325,000	\$325,000	\$0	\$50,000		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Executed 6/5/98.
98-B05	Sand and Silt Creek watershed project	Water Quality and Temperature	Colusa County Resource Conservation District	Colusa Basin	\$598,633	\$598,633	\$39,744	\$0	\$1,508,000		Evaluate different application practices and vegetation conditions on impact to level of surface runoff of OP pesticides and sediments. Water quality and flow measurements in runoff adjacent to sites. Evaluate if stable grade conditions will reduce erosion. Site erosion monitoring, pre and post project.	Executed 6/24/98.
98-B07	Evaluation of selenium sources, levels, and consequences in the Delta	Water Quality and Temperature	USGS	Delta	\$1,588,709	\$1,588,709	\$268,168	\$0	\$1,190,655		Evaluate sources of selenium at various times and locations. Collect and analyze water column samples. Evaluate impact of selenium on critical prey/indicator species at various times and locations, and relate to impacts on species of concern. Collect and analyze selected prey/indicator species. Measure levels and kinetics in species of concern under controlled uptake conditions.	Interagency contract executed 8/12/98.
98-B08	Cache Slough habitat enhancement	Habitat Restoration	RD No. 2060	Delta	\$85,000	\$85,000	\$0	\$0	\$0	6 <sup>2</sup>	Restoration of levee using environmentally friendly approaches. Sediment deposition/accretion and topographic surveys, pre and post project. Survey of vegetation survivorship, diversity and growth at various increments of time.	Executed 6/2/98.
98-B09	IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks	Water Quality and Temperature	Central Contra Costa Sanitary District	Delta	\$266,000	\$266,000	\$16,007	\$0	\$191,000		Increase awareness of users to detrimental impacts and mitigations approaches. User survey on participation, value, and product sales pre and post implementation. Reduce the runoff levels as a result of implementation. Concentration of OP pesticides in influent of waste water, and may have urban creek water quality measurements, and compare pre and post project.	Executed 8/20/98.
98-B10	Inventory of forest road systems, Cat Creek Watershed	Watershed Management	USFS	Cosumnes River	\$38,000	\$38,000	\$0	\$0	\$0		Develop watershed restoration plan to reduce erosion. Monitor aquatic habitat and channel characteristics, water chemistry and species population/use.	Executed 8/6/98.
98-B11	Woodbridge fish screen and passage	Fish Screen	Woodbridge Irrigation District	Mokelumne River	\$1,575,000	\$1,575,000	\$124,581	\$0	\$0		Increase upstream passage of returning adults. Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Executed 6/30/98.
98-B13	Napa River Wetlands acquisition	Habitat Restoration	Napa County Land Trust	Northbay	\$1,000,000	\$1,000,000	\$910,000	\$0	\$0	956	Protect and restore native marsh wetland habitat. Monitor vegetation, fish and wildlife populations.	Executed 9/24/98.
98-B14	Bacterial treatment of Selenium in the Panoche Drainage	Water Quality and Temperature	UC Berkeley	San Joaquin Mainstem	\$1,148,326	\$1,148,326	\$165,293	\$0	\$0		Demonstrate the effectiveness of microalgae as a substrate for nitrate and selenium reduction in agricultural discharge water. Treatment effectiveness and operational issues. Costs of process, to estimate costs for full scale operation.	Executed 9/9/98.
98-B15	Evaluation of tagging data	Fish Management and Hatchery Operations	Northwest Marine Technology Inc	Landscape	\$625,000	\$625,000	\$35,084	\$0	\$0		Evaluate feasibility and benefits for mass marking techniques. Data review on tagging and recovery.	Executed 7/1/98.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
98-B16	Battle Creek screens and fish passage (A194)	Fish Passage	USBR	Battle Creek	\$395,000	\$395,000	\$10,688	\$0	\$0		Increase upstream passage of returning adults over barriers to make habitat available for spawning and rearing. Video observation and radiotag tracking at the CNFH fish ladder. Monitor and estimate populations via snorkel, carcass counts, redd and aerial surveys. Measure relative abundance, distribution and emigration timing of juveniles via screwtrap. Measure and evaluate fish injury with CNFH passage using organosomatic index. Measurement of flow and velocity at various stage heights to determine performance and reliability to design standards. Preclude passage of hatchery fish during their return to the hatchery. Direct observations at weir and upstream; tracking of radio tagged fish. Increase riverine habitat quality and quantify (flow). Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Executed 9/10/98.
98-B17	Cosumnes floodplain acquisition and restoration	Habitat Restoration	The Nature Conservancy	Cosumnes River	\$3,500,000	\$3,500,000	\$3,500,000	\$0	\$0	2,256 <sup>1</sup>	Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Executed 7/8/98.
98-B21	Anadromous Fish Passage at Clough Dam on Mill Creek	Fish Passage	DWR	Mill Creek	\$1,280,000	\$1,280,000	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Agreement being prepared.
98-B22	Fish Passage Improvement Project at the Red Bluff Diversion Dam (B1004)	Fish Passage	Tehama-Colusa Canal Authority	Sacramento Mainstem	\$340,600	\$340,600	\$0	\$0	\$0		Similar to 98-B16	Executed 3/8/99.
98-B23	Steelhead and Chinook Salmon Fish Passage Barrier Remediation on the Guadalupe	Fish Passage	Natural Heritage Institute et. al.	Landscape	\$178,200	\$0	\$0	\$0	\$0		Increase upstream passage of returning adults. Measure physical configuration and velocities. Observation of upstream migration.	Agreement sent 3/16/99.
98-B24	ACID Fish Passage and Fish Screen Improvement Project, Phase II, Final Design (B1007)	Fish Passage	Anderson-Cottonwood Irrigation District	Sacramento Mainstem	\$860,000	\$860,000	\$117,833	\$0	\$0		Protect and restore tidally influenced wetlands, riparian corridors, and upland habitats	Agreement sent 3/11/99.
98-B25	Cosumnes River Salmoid Barrier Program Fishery(B1009)	Fish Passage	Foundation of California	Cosumnes River	\$188,255	\$188,255	\$0	\$0	\$188,255		Increase upstream passage of returning adults. Pre and Post project monitoring of spatial and temporal spawning distribution and spawning habitat.	Executed 3/11/99.
98-B26	Boeger Family Farm Fish screen Phase II: Construction	Fish Passage	Boeger Family Farms	Sacramento Mainstem	\$139,500	\$0	\$0	\$0	\$139,500		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Agreement being prepared.
98-B27	Hastings Tract Fish Screen Phase II: Construction (B1015)	Fish Passage	Hastings Island Land Company	Delta	\$271,250	\$0	\$0	\$0	\$271,750		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Agreement being prepared.
98-B28	City of Sacramento Fish Screen Replacement Project Phase 2 - Design (B1016)	Fish Passage	City of Sacramento	Sacramento River	\$654,500	\$0	\$0	\$0	\$745,000		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Agreement being prepared.
98-B29	American Basin Fish Screen and Habitat Improvement Project (B1017)	Fish Passage	Natomas Mutual Water Company	Sacramento River	\$200,000	\$0	\$0	\$200,000	\$0		Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities.	Agreement being prepared.
98-B30	San Joaquin Valley Salmonids in the Classroom Program Enhancement (H1001)	Education	DFG	San Joaquin River	\$3,000	\$0	\$0	\$0	\$0		Increase student awareness of issues and needs of aquatic and terrestrial natural resources.	Executed.
98-B31	Travelling Film Festival/Heron Booth/Video Archive (H1002)	Education	Independent Documentary Group	Landscape	\$54,000	\$54,000	\$43,902	\$0	\$0		Increase public awareness of issues and needs of functional river system.	Executed 2/23/99.
98-B32	Environmental Agriculture Conferences and Field Tours (H1005)	Education	Committee for Sustainable Agriculture	Landscape	\$28,000	\$28,000	\$14,000	\$0	\$0		Increase farmer awareness of issues and needs of functional river system.	Executed 2/25/99.
98-B33	Sacramento River, Headwaters to the Ocean, Public Information and Education (H1006)	Education	Sacramento River Discovery Center	Sacramento River	\$49,640	\$49,640	\$21,907	\$410,000	\$1,082,500		Increase public awareness of issues and needs of functional river system.	Executed 2/25/99.
98-B34	Discover the Flyway (H1008)	Education	Yolo Basin Foundation	Delta	\$49,000	\$49,000	\$0	\$0	\$0		Increase student awareness of wetlands and wildlife issues in the Yolo Basin.	Executed 3/22/99.
98-B35	The Butte Creek Watershed Educational Workshops and Field Tours Series (H1010)	Education	CSU, Chico	Butte Creek	\$33,000	\$33,000	\$0	\$0	\$0		Increase public awareness of issues and needs of aquatic and terrestrial natural resources.	Executed 3/15/99.
98-B36	Bay-Delta Environmental Restoration Education Program (H1015)	Education	Water Education Foundation	Landscape	\$40,000	\$40,000	\$0	\$0	\$0		Increase public awareness of environmental issues in the Bay-Delta.	Executed 3/8/99.
98-B37	The Virtual Science Center and Hands-on Learning Programs (H1016)	Education	The Delta Science Center at Big Break	Delta	\$42,000	\$0	\$9,598	\$0	\$0		Increase public awareness of environmental issues in the Bay-Delta.	Project cancelled.
98-B38	Water Hyacinth Education Program (H1017)	Education	Sacramento Regional County Sanitation District	Delta	\$9,600	\$0	\$0	\$0	\$0		Increase public awareness of issues related to release of hyacinth.	Executed.
98-B39	Water Challenge 2010 (H1018)	Education	San Francisco Bay Model Visitor Center, USACE	Landscape	\$64,500	\$64,500	\$0	\$0	\$15,000		Increase public awareness of environmental and water management issues in the Bay-Delta.	Executed 3/5/99.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.



CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPRA Funding	Other Funding	Acres	Monitoring	Status
99-B040	Tuolumne River Natural Resources Program (H1019)	Education	City of Modesto	Tuolumne River	\$55,255	\$55,255	\$0	\$0	\$0		Increase public awareness of issues and needs of river system environment.	Executed.
99-B01	Battle Creek Salmon and Steelhead Restoration Project (DA1)	Fish Passage	PG&E	Battle Creek	\$28,000,000	\$198,304	\$198,304	\$0	\$0		Increase upstream passage of winter-run salmon and spring-run salmon	Contract being prepared.
99-B02	Lower Battle Creek Project Phase II (DA2)	Fish Passage	Ducks Unlimited, Inc.	Battle Creek	\$775,000	\$0	\$0	\$0	\$0		Increase upstream passage of returning adult s. Reduces entrainment of outmigrating fish.	Contract being prepared.
99-B03	ACID Fish Passage and Fish Screen Improvement Project, Phase III (DA3)	Fish Passage	Jardenson-Cottonwood Irrigation District	Sacramento Mainstem	\$5,253,000	\$0	\$0	\$0	\$0		Increase upstream passage of returning adults. Reduce entrainment of outmigrating fish. Measure screen approach, sweep, and bypass flow velocities. Evaluate the impact of shallow water restoration actions on water quality. Collected and conducted physical/chemical analysis of water and sock samples.	Contract being prepared.
99-B04	Marcelo River Salmon Habitat Enhancement, Lower Slope (DA5)	River Channel Changes	DWR	Marcelo River	\$130,000	\$0	\$0	\$0	\$0		Reduce entrainment of outmigrating fish. Measure temperature and fish distribution and abundance.	Contract being prepared.
99-B05	Marcelo River Salmon Habitat Enhancement, Frazzetta Reach (DA6)	River Channel Changes	DWR	Marcelo River	\$1,033,000	\$0	\$0	\$0	\$0		Same as 99-B04	Contract being prepared.
99-B06	Assessment of Ecological and Human Health Impacts of Mercury in the Bay-Delta	Water Quality and Temperature	CSU, San Jose	Landscape	\$3,800,000	\$0	\$0	\$0	\$710,000		Determine bioavailable sources of mercury in the Bay-Delta Watershed. Obtain data on mercury levels in fish and complete pilot mine remediation feasibility studies.	Contract being prepared.
99-B07	Fish Passage Improvement Project at the Red Bluff Diversion Dam	Fish Passage Improvements	Tulare-Colusa Canal Authority	Sacramento Mainstem	\$1,030,000	\$0	\$0	\$0	\$0			
99-B08	Improve Upstream Ladder & Barrier Weir @ Coleman Natl Fish Hatchery at Battle Creek	Fish Passage Improvements	USFWS	Battle Creek	\$1,713,302	\$0	\$0	\$0	\$0			
99-B09	Development of Implementation Plan for Lower Yuba River Adiponorous Fish Habitat Restoration	Habitat Restoration in Floodplain & Marshes	Surface Water Resources, Inc.	Yuba River	\$176,133	\$0	\$0	\$0	\$0			
99-B10	Species & Community Profiles of the SF Bay Area Wetlands Ecosystem Goals Project	Habitat Restoration in Floodplain & Marshes	Friends of S.F. Estuary	Bay Area	\$45,320	\$0	\$0	\$0	\$0			
99-B11	South Napa River Tidal Slough & Floodplain Restoration Project	Habitat Restoration in Floodplain & Marshes	City of American Napa	Napa	\$1,055,500	\$0	\$0	\$0	\$0			
99-B12	Riparian Corridor Acquisition & Restoration Assessment	Habitat Restoration in Floodplain & Marshes	USBLM	Sacramento Mainstem	\$2,240,250	\$0	\$0	\$0	\$0			
99-B13	Understanding Tidal Marsh Restoration Processes & Patterns	Habitat Restoration in Floodplain & Marshes	Univ. of Washington	SF Bay Area	\$1,073,513	\$0	\$0	\$0	\$0			
99-B14	Biological AG Systems in Cotton BASIC-Reducing Synthetic Pesticides & Fertilizers in the N. SJ Vly	Watershed Management	Sustainable Cotton Project	San Joaquin Mainstem	\$473,800	\$0	\$0	\$0	\$0			
99-B15	Douglas Long Canyon Paved Watershed Management	Paved Co Water Management	Pacer Co Water Agency	American River	\$86,108	\$0	\$0	\$0	\$0			
99-B16	Determination of the Causes of Dissolved Oxygen Depletion in the SJ River	Water Quality and Temperature Improvements	DWR	San Joaquin Mainstem	\$892,400	\$0	\$0	\$0	\$0			
99-B17	Disposed Organic Carbon Release from Delta Wetlands, Part 1	Water Quality and Temperature Improvements	USGS	Landscape	\$1,434,449	\$0	\$0	\$0	\$0			
99-B18	Evaluation of Potential Impacts of Chinese Mitten crab on Benthic Comm. in the Delta	Introduce & Underdrains Species Control	DWR	Landscape	\$152,233	\$0	\$0	\$0	\$0			
99-B19	Health Monitoring of Hatchery & Natural Fall-run Chinook in SJ River	Improved Fish Management & Hatchery	USFWS	San Joaquin Mainstem	\$38,976	\$0	\$0	\$0	\$0			
99-B20	Sacramento River Discovery Center	Monitoring, Permit Coordination & Other Special Support	Sacramento River Discovery Center	Sacramento Mainstem	\$39,552	\$0	\$0	\$0	\$0			
99-B21	Estuary Action Challenge Environmental Education Project	Monitoring, Permit Coordination & Other Special Support	Earth Island Institute	Landscape	\$515,000	\$0	\$0	\$0	\$0			
99-B22	Water Challenge 2010 Exhibit	Monitoring, Permit Coordination & Other Special Support	USCOE	Landscape	\$52,015	\$0	\$0	\$0	\$0			

1 Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

2 Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
99-B23	The Learning Watershed Project	Monitoring, Permit Coordination & Other Special Support	American River Watershed Institute	American River	\$56,907	\$0	\$0	\$0				
99-B24	Traveling Film Festival Exhibit	Monitoring, Permit Coordination & Other Special Support	Independent Documentary Group	Landscape	\$51,500	\$0	\$0	\$0				
99-B25	River Studies Center Exhibits & Programs	Monitoring, Permit Coordination & Other Special Support	SJ River Parkway & Conservation Trust	San Joaquin Mainstem	\$70,467	\$0	\$0	\$0				
99-B26	1989/2000 Bay-Delta Education Program	Monitoring, Permit Coordination & Other Special Support	Water Education Foundation	Landscape	\$33,269	\$0	\$0	\$0				
99-B27	Watershed Educational Training	Monitoring, Permit Coordination & Other Special Support	Colusa County Resource Conservation District	Sacramento Tributaries	\$13,390	\$0	\$0	\$0				
				Total: \$	\$89,509,918	\$36,973,071	\$8,878,604	\$635,000	\$15,593,660			
				46		41%	10%					67%
				Contracts		Obligated	Expended					Executed
Contract Agency: US Environmental Protection Agency (Federal funds)												
97-E01	Watershed Plan (Big Chico Creek) (F219)	Watershed Management	Big Chico Creek Watershed Alliance	Big Chico Creek	\$295,313	\$295,313	\$118,125				Reduce impacts of past and ongoing land use practices to enhance aquatic habitats. Conduct riparian and geomorphic surveys, pre and post project.	\$127,517 will be obligated in April. EPA watershed funds.
97-E02	Watershed Planning (Deer Creek) (F237)	Watershed Management	Deer Creek Watershed Conservancy, CSU Chico	Deer Creek	\$196,554	\$196,554	\$78,622		\$231,000		Reduce land use practices detrimental to aquatic environments. Monitor water quality.	Executed.
98-E01	Napa River Watershed (M92)	Watershed Management	Napa County Resource Conservation District	Northbay	\$252,000	\$252,000	\$213,317	\$0	\$0		Protect and enhance the riparian and riverine habitats. Monitor habitat characteristics, geomorphology and bank stability, flow/runoff, species assessments, and water quality. Facilitate broadbased local stakeholder group in development of watershed plan. Develop river model to assess alternative scenarios. Collect flow and channel/geomorphology data.	Executed 5/29/98.
98-E02	Sonoma Creek Watershed (M113)	Watershed Management	Southern Sonoma County Resource Conservation District	Northbay	\$302,000	\$302,000	\$115,828	\$0	\$0		Protect and enhance the riparian and riverine habitats. Monitor riverine conditions: gravel, temperature. Riparian monitoring and non native control. Implement environmentally-responsible vineyard management practices. Monitor water quality and habitat characteristics. Increase public awareness of issues and needs of aquatic and terrestrial natural resources. Increase upstream passage of native fish.	Executed 5/29/98.
98-E03	Regional Wetlands Goals Project (M130)	Habitat Restoration	San Francisco Estuary Institute	Northbay	\$78,000	\$78,000	\$0	\$0	\$200,000		Evaluate restoration and rehabilitation needs of region.	Completed.
98-E04	Petaluma River Watershed Restoration Program (G1014)	Watershed Management	Southern Sonoma County Resource Conservation District	Northbay	\$220,000	\$220,000	\$0	\$0	\$0		Evaluate and implement restoration and rehabilitation needs of the region.	Executed 5/13/99
98-E05	Cottonwood Creek Watershed Group Formation (G1015)	Watershed Management	Cottonwood Creek Watershed Group	Cottonwood Creek	\$161,000	\$161,000	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate restoration needs of region.	Executed on 5/11/99
98-E06	Battle Creek Watershed Stewardship (G1018)	Watershed Management	Battle Creek Watershed Conservancy	Battle Creek	\$145,000	\$145,000	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Improve watershed practices to reduce detrimental impacts on aquatic habitats.	EPA executed a cooperative agreement with NFWF in February to manage these 14 watershed projects. A NFWF sub-agreement is expected.
98-E07	Local Watershed Stewardship: Steelhead Trout Plan (G1022)	Watershed Management	Friends of Corte Madera Creek Watershed	Northbay	\$47,500	\$47,500	\$0	\$0	\$0		Develop steelhead restoration plan. Collect fish habitat and population information and thermograph data.	Executed on 4/2/99.
98-E08	Cold Water Fisheries and Water Quality Element (G1023)	Watershed Management	City of San Jose: Environmental Services Department	Other	\$200,000	\$200,000	\$0	\$0	\$0	16	Evaluate restoration needs of region.	EPA executed a cooperative agreement with NFWF in February to manage these 14 watershed projects. A NFWF subagreement is expected.
98-E09	Merced River Corridor Restoration Plan (G1026)	Watershed Management	Stillwater Sciences & Merced Co. Planning & Comm. Develop. Dept.	Merced River	\$300,000	\$300,000	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate restoration needs of region.	Executed 5/25/99

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
98-E10	South Yuba River Coordinated Watershed Management Plan (G1029)	Watershed Management	DPR	Yuba River	\$264,000	\$264,000	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate restoration needs of region.	Executed 5/13/99
98-E11	Watershed Restoration Strategy for the Yolo Bypass (G1033)	Watershed Management	Yolo Basin Foundation, Inc.	Delta	\$244,188	\$244,188	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate restoration needs of region.	Executed.
98-E12	Proposal to Develop Local Watershed Stewardship Plan for the Lower Mokelumne River (G1038)	Watershed Management	San Joaquin County Resource Conservation District	Mokelumne River	\$159,000	\$159,000	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate restoration needs of region.	Executed 4/9/99
98-E13	Union School Slough Watershed Improvement Program (G1040)	Watershed Management	National Audubon Society - California	Yolo Basin	\$636,000	\$636,000	\$0	\$0	\$0		Develop and implement riparian restoration project on farms. Water quality and habitat surveys	Executed 5/25/99
98-E14	American River Integrated Watershed Stewardship Strategy (G1047)	Watershed Management	Placer County Resource Conservation District	American River	\$220,750	\$220,750	\$0	\$0	\$0		Evaluate restoration needs of region.	Executed
98-E15	Sulphur Creek Coordinated Resource Management Planning Group (G1049)	Watershed Management	Sacramento Watersheds Action Group	Clear Creek	\$23,828	\$23,828	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in implementation of restoration activities.	Executed 5/13/99
98-E16	Lower Putah Creek Watershed Stewardship Program (G1052)	Watershed Management	Solano County, Department of Environmental Management	Putah Creek	\$100,500	\$100,500	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate restoration and rehabilitation needs of region.	EPA executed a cooperative agreement with NFWF in February to manage these 14 watershed projects. A NFWF sub-agreement is expected.
98-E17	Alhambra Creek Watershed CRMP Program (G1053)	Watershed Management	Contra Costa Resource Conservation District	Suisun Marsh	\$138,500	\$138,500	\$0	\$0	\$0		Facilitate broadbased local stakeholder group in development of watershed plan. Evaluate and implement restoration and rehabilitation needs of region.	Executed 4/8/99
				<b>Total:</b>	<b>\$3,982,133</b>	<b>\$3,982,133</b>	<b>\$525,892</b>	<b>\$0</b>	<b>\$431,000</b>			
				19		100%	13%					100%
				Contracts		Obligated	Expended					Executed
Contract Agency: US Fish and Wildlife Service (Federal funds)												
98-F01	Butte Creek Watershed (F222,224,225)	Watershed Management	CSU, Chico	Butte Creek	\$261,300	\$261,300	\$19,223	\$0	\$0		Evaluate erosion sediment sources and implement corrective actions. Inventory road infrastructure and erosion features and changes over time. Protection and enhancement of riparian corridors and floodplain habitats and processes. Collect geomorphic data (channel incisions, gravel deposits, terraces, etc.) in channel and riparian characterization via surveys. Increase awareness of issues and needs of watershed health.	Executed.
98-F02	Butte Creek Watershed Coordinator Assistant (F221)	Watershed Management	Butte Creek Watershed Conservancy	Butte Creek	\$32,700	\$32,700	\$0	\$0	\$0		Improve coordination of watershed groups and restoration activities.	Contract under preparation.
98-F03	Butte Creek acquisition and riparian restoration (G218)		CSU, Chico	Butte Creek	\$125,000	\$125,000	\$125,000	\$0	\$0	80	Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Executed.
98-F04	Lower Mill Creek riparian restoration (G292)		Mill Creek Conservancy, The Nature Conservancy	Mill Creek	\$29,730	\$29,730	\$0	\$0	\$0	74 <sup>2</sup>	Restore and improve floodplain functions. Restore riparian and wetland vegetation. Monitor vegetation, fish and wildlife populations.	Executed.
98-F06	Tuolumne River setback levees and channel restoration (H136)	Fish Passage	Turlock Irrigation District	Tuolumne River	\$655,700	\$655,700	\$0	\$0	\$0		Improve and restore spawning habitat and durability. Monitor geomorphology (pebble counts, tracer rocks, stabilization) and channel characteristics, pre and post project and after flow events. Conduct redd counts and other use surveys. Conduct tracer rock evaluations. Improve survival of outmigrating smolts due to predation. Measure conversion of predator habitat (temperature, flow, transit, channel cross section). Survey predator population density. Conduct mark-recapture of smolts. Improve and restore riparian communities. Monitor composition, distribution, and survival of plantings, pre and post project.	Executed 9/3/98.
98-F07	Grayson River Ranch Perpetual Easement and Restoration (C1003)	Habitat Restoration	East Stanislaus RCD and Friends of the Tuolumne	Tuolumne River	\$732,000	\$732,000	\$0	\$0	\$311,000	140 <sup>1</sup>	Protect and enhance riparian and floodplain habitats. Measure species diversity and populations compared with desired conditions.	Executed. Nearing completion of Perpetual Easement acquisition.
98-F08	Hill Slough West Habitat Demonstration Project (C1004)	Habitat Restoration	DFG	Suisun Marsh	\$200,000	\$200,000	\$0	\$0	\$0		Restore tidal action of seasonal and permanent wetlands. Survey fishery and wildlife use and habitats. Survey vegetation composition, growth, trends and recruitment.	Executed. CDFG writing RFP to hire consultant to do topographic surveys & address hydrologic issues.
98-F09	Rhode Island Floodplain Management and Habitat Restoration (C1006)	Habitat Restoration	DFG	Delta	\$25,000	\$25,000	\$0	\$0	\$0	67 <sup>2</sup>	Restore and improve floodplain functions and shallow water and riparian habitat. Survey of fish and avian use. Survey of habitat conditions.	Cooperative Agreement sent to Applicant for signature 1/13/99. 30-day notice sent.
98-F10	Nelson Slough Wildlife Area Restoration Demonstration Project (C1008)	Habitat Restoration	DFG	Feather River	\$250,476	\$0	\$0	\$0	\$10,000	85 <sup>2</sup>	Evaluate effectiveness of passive floodplain functioning to restore riparian and wetland vegetation. Monitor natural colonization of vegetation; fish use of floodplain; and fish stranding.	CDFG withdrew proposal (per Ron Remple), 6/29/99.

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
98-F11	Phase 3 - Merced River Salmon Habitat Enhancement (C1009)	Habitat Restoration	DFG	Merced River	\$2,433,759	\$2,433,759	\$0	\$2,433,759	\$790,000		Monitor physical processes, abundance of fish, revegetation and predation. Topo surveys, fish sampling. Mark/recapture, photo survey, population census.	Executed
98-F12	Stone Lakes NWR Land Acquisitions (C1010)	Habitat Restoration	USFWS	Delta	\$1,900,000	\$1,900,000	\$0	\$0	\$0	658 <sup>1</sup>	Protect and restore tidal and seasonal wetlands, riparian corridors and upland habitats. Survey for fish and wildlife use.	Funds transferred to USFWS, Sacramento Realty Office. Implementation begun. Offer made on one property 3/3/99.
98-F13	Petaluma Marsh Expansion Project - Marin County (C1016)	Habitat Restoration	Marin Audubon Society	Northbay	\$352,135	\$352,135	\$0	\$0	\$525,885	181	Protect and restore tidal marsh. Evaluate fish and avian use, sedimentation and other channel/geomorphic processes, vegetation and habitat characterization	Executed. Updated appraisal report shows property value of \$544,400. Finalizing restoration design.
98-F14	South Napa River Wetlands Acquisition and Restoration Program (C1017)	Habitat Restoration	Napa County Land Trust	Northbay	\$431,000	\$431,000	\$0	\$0	\$65,000	600	Recolonization of native plants, plant surveys and survival rates. Monitor tidal and over bank flows and sedimentation.	Executed. Coordinating with Flood Control District regarding EIR for acquisition. Met with locals and attended public hearing regarding acquisitions.
98-F15	Lower Clear Creek Floodway Restoration Project (C024)	Habitat Restoration	Western Shasta Resource Conservation District	Clear Creek	\$3,559,596	\$3,559,596	\$2,954	\$500,000	\$0	70	Improve spawning and rearing habitat and its durability. Survey spawning habitats and spawning/rearing use. Conduct tracer rock evaluations across different locations. Monitor flows and geomorphic and channel characteristics over time. Reduce stranding of outmigrating/rearing fish. Visual, seining and electrofishing survey following flood events. Restore natural functioning riparian communities. Map and characterize the composition of vegetation communities and natural recruitment.	Executed.
98-F16	Fern-Headreach Tidal Perennial Aquatic and Shaded River Aquatic Conservation Project (C1025)	Habitat Restoration	Thomas Luckey (L & L Farms, LLC)	Delta	\$425,000	\$425,000	\$0	\$0	\$0	166 <sup>2</sup>	Project will protect riparian and tidal shallow water habitat. Survey for fish and wildlife use.	Executed. Property Approval, acquisition and Contaminant surveys being completed.
98-F17	Benicia Waterfront Marsh Restoration (C1026)	Habitat Restoration	City of Benicia	Suisun Marsh	\$59,000	\$59,000	\$0	\$0	\$0	8 <sup>2</sup>	Restore tidal action to salt marsh habitat to provide tidal saline emergent wetlands. Survey target wetland vegetation and removal of exotic plants. Survey for fish and wildlife use.	Executed. Contracts being executed with consultants.
98-F18	Floodplain Acquisition, Management, and Monitoring on the Sacramento River (C1028)	Habitat Restoration	The Nature Conservancy, Wildlife Conservation Board, and others.	Sacramento Mainstem	\$1,000,000	\$1,000,000	\$0	\$0	\$0	500	Develop projectwide monitoring to assess channel meander and habitat restoration. Survey geomorphologic processes and floodplain habitat response.	Executed.
98-F19	Cosumnes River Acquisition, Restoration Planning and Demonstration (C1032)	Habitat Restoration	The Nature Conservancy	Cosumnes River	\$750,000	\$750,000	\$0	\$0	\$0	800 <sup>2</sup>	Acquire and restore floodplain and wetland habitat and functions. Monitor habitat characteristics and species use.	Executed.
98-F20	Deer and Mill Creeks Acquisition and Enhancement	Habitat Restoration	The Nature Conservancy	Deer, Mill Creeks	\$1,000,000	\$1,000,000	\$0	\$0	\$0	2,500 <sup>1</sup>	Increase native riparian growth adjacent to the river. Measure tree density and species composition and height, pre and post project.	Executed. Acquisition negotiations initiated.
98-F21	Lower San Joaquin River Floodplain Protection and Restoration Project (C1038)	Habitat Restoration	USFWS, San Luis National Wildlife Refuge	San Joaquin River	\$1,100,000	\$1,100,000	\$0	\$0	\$4,799,000	303	Protect and enhance riparian and floodplain habitats. Baseline habitat and wildlife surveys. Habitat mapping.	Funds transferred to USFWS, San Luis NWR Complex. Implementation begun. Appraisals made and negotiations underway to acquire
98-F22	Biological Restoration and Monitoring in the Suisun Marsh/North San Francisco Bay Ecological Zone (C1042)	Habitat Restoration	CSU, Hayward	Suisun Marsh	\$772,667	\$772,667	\$55,374	\$0	\$243,812	272 <sup>2</sup>	Restore emergent and immersed marshland. Monthly monitoring for sedimentation, water quality, vegetation, fish and avian use and populations, and planktonic foods.	Agreement signed by Cooperator 1/4/99. Implementation begun.
98-F23	South Napa River Tidal Slough and Floodplain Restoration Project (C1044)	Habitat Restoration	City of American Canyon	Northbay	\$1,455,000	\$1,455,000	\$12,691	\$0	\$716,000	519 <sup>2</sup>	Monitor return of tidal flows, recolonization of native plants, survival of riparian vegetation and fish utilization.	Executed. Acquisition Appraisal Report sent to Realty for review on 6/22/99. Wetlands delineation completed.
98-F24	Butte Creek Riparian Restoration Demonstration	Habitat Restoration	CSU, Chico	Butte Creek	\$76,348	\$76,348	\$693	\$0	\$0		Monitor revegetation success. Bioassessment of benthic invertebrates. Water quality monitoring. Wildlife inventories.	Executed. Planning and designing for restoration, trails and signing underway using Research Foundation employees.
98-F25	Exotic Species Control Program	Introduced and Undesirable	USFWS	Landscape	\$1,250,000	\$1,250,000	\$33,836	\$0	\$0		CALFED has developed this program to identify and implement projects addressing exotic species control.	Projects under this program will be selected through the current PSP.
99-F01	Restore Special Run Pool 10 Reach (DA7)	River Channel Changes	Turlock Irrigation District	Tuolumne River	\$165,000	\$0	\$0	\$356,000	\$0		Monitor physical habitat changes, survival of riparian vegetation and fish population changes, post restoration.	Contract being prepared.
99-F02	Restore MJ Ruddy Reach (DA8)	River Channel Changes	Turlock Irrigation District	Tuolumne River	\$3,332,000	\$0	\$0	\$3,079,000	\$0		Monitor physical habitat changes, survival of riparian vegetation and fish population changes, post restoration.	Contract being prepared.
99-F03	Restore habitat on McCormack-Williamson levees (DA12)	Habitat Restoration	The Nature Conservancy	Delta	\$980,000	\$0	\$0	\$0	\$250,000		Monitor riparian vegetation, wildlife, avian and fish resources.	Proponent expects to sign option 4/99.
99-F04	McCormack-Williamson Tract Acquisition (F1-307)	b17	The Nature Conservancy	Delta	\$5,250,000	\$0	\$0	\$0	\$0	1655 <sup>1</sup>	See 99-F03	Proponent expects to sign option 4/99.
99-F05	Non-native Invasive Species Advisory Council	Introduced and Undesirable Species Control	USFWS	Landscape	\$50,000	\$0	\$0	\$0	\$0			
99-F06	Reducing Risk of Importation & Distribution on Non-native Invasive Species Through Outreach & Education	Introduced and Undesirable Species Control	UC Davis	Landscape	\$105,468	\$0	\$0	\$0	\$0			
99-F07	Zebra Mussel Detection & Outreach Project	Introduced and Undesirable Species Control	DWR	Landscape	\$100,000	\$0	\$0	\$0	\$0			
99-F08	Purple Loostripe Prevention, Detection & Control in the Sac/SJ Delta & Associated Hydrologic Units	Introduced and Undesirable Species Control	DFA	Landscape	\$201,306	\$0	\$0	\$0	\$0			

<sup>1</sup> Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.

<sup>2</sup> Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

1 Acquisition of land where all or part are maintained in existing agricultural use - farmed or grazed.  
2 Acquisition of existing habitat, or restoration of public lands or existing degraded habitat - No land use change.

CALFED No.	Project Description	Project Category	Applicant	Geo Area	CALFED Approved Funding	CALFED Funds Obligated	CALFED Funds Expended	CVPIA Funding	Other Funding	Acres	Monitoring	Status
99-F09	Introduced Spartina Eradication Project	Undesirable Species Control	California	Landscape	\$250,000	\$0	\$0	\$0				
99-F10	Practical Guidebook to Prevent Invasive Plants in Shallow Water Habitats of the Bay-Delta	Introduced and Undesirable Species Control	SFEI	Landscape	\$76,750	\$0	\$0	\$0				
99-F11	Effects of Introduced Clams on the Food Supply of Bay-Delta Fishes	Introduced and Undesirable Species Control	SF State University	Landscape	\$100,490	\$0	\$0	\$0				
					Total: \$	\$29,573,423	\$18,625,935	\$249,771	\$6,368,759	\$7,712,697		
					Contracts		Obligated	Expended				46%
					28	%	1%					Executed
Contract Agency: US Army Corps of Engineers (Federal funds)												
98-A01	Prospect Island Habitat Protection Project	Habitat Restoration	Della		\$2,000,000	\$1,683,045	\$0	\$0			Project complete.	
98-A02	Flood Control Bypass Habitat	Habitat Restoration	Della		\$1,200,000	\$10,696	\$0	\$0			CALFED has identified this program to fund Flood Control Bypass habitat projects. They are now developing a strategy for current PSP.	
99-A01	Prospect Island Monitoring Project	Habitat Restoration	DWR	Della	\$915,000	\$0	\$0	\$0			Restore 1,300 acres of shallow water habitat. Monitor fish, wildlife, water quality, vegetation, sediments, nutrients and benthic communities.	Contract being prepared
99-A02	Inundation of a Section of the Yolo Bypass to Restore Sacramento Spillway & Other	Natural Heritage Institute			\$820,679	\$0	\$0	\$0				
					Total: \$	\$4,935,679	\$3,200,000	\$2,049,060	\$0	\$0		33%
					Contracts		Obligated	Expended				Executed
					3	65%	42%					
Contract Agency: National Resources Conservation Service (Federal funds)												
98-R01	Small Diversion Fish Screen Program	Fish Screen	NRCS	Della	\$900,000	\$900,000	\$0	\$0			Reduce entrainment of outmigrating and resident fish. Measure screen approach, sweep, and bypass flow velocities.	Funds will be used to complete existing projects. New projects will be recruited through NRCS process.
99-R01	Tuolumne and San Joaquin Watershed Management	NRCS	San Joaquin River		\$1,545,000	\$0	\$0	0	\$1,500,000	1,200	Acquire and restore areas prone to flood damage. Monitor vegetation and wildlife populations.	Contract being prepared
					Total: \$	\$2,445,000	\$900,000	\$0	\$1,500,000			0%
					Contracts		Obligated	Expended				Executed
					Total: \$	\$211,934,691	\$122,645,572	\$38,382,177	\$32,076,592	\$58,470,391		
					Contracts		Obligated	Expended				
					18%	59%						